

WHAT IS CLAIMED IS:

1. A system for automated secure digital mobile video monitoring and recording, the system comprising:

5 an authenticated acquisition subsystem for digitally watermarking video data;

a video management subsystem in signal communication with the authenticated acquisition subsystem for storage, viewing and verification of the digitally watermarked video data; and

10 a secure wireless video transfer subsystem in signal communication between the acquisition and management subsystems.

2. A system as defined in Claim 1, the video management subsystem comprising a video database for storing video data.

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3. A system as defined in Claim 1 wherein the video management subsystem is in intermittent signal communication with the authenticated acquisition subsystem.

20 4. A system as defined in Claim 1, the authenticated acquisition subsystem comprising a video imaging device for acquiring original video data.

25 5. A system as defined in Claim 1, the authenticated acquisition subsystem comprising a watermarking device for applying at least one signature to the video data.

6. A system as defined in Claim 1, the video management subsystem comprising a verification device for verifying at least one signature in the video data.

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7. A system as defined in Claim 1, the video management subsystem comprising a watermark verifying playback device for verifying at least one signature and displaying verified video data.

5 8. A system as defined in Claim 1, further comprising a secure wireless transfer subsystem.

9. A system as defined in Claim 8, the secure wireless transfer subsystem comprising:

10 at least one wireless client; and

at least one wireless access point in wireless signal communication with said at least one wireless client.

10. A system as defined in Claim 1, further comprising watermarking means for digitally watermarking the video data.

11. A system as defined in Claim 10, further comprising verification means in signal communication with the watermarking means for verifying the digitally watermarked video data.

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12. A system as defined in Claim 2, further comprising a mobile playback device in signal communication with said video database for receiving and displaying stored video data.

25 13. A system as defined in Claim 1, the video management subsystem comprising at least one camera for capture and wireless transmission of video data from a fixed location to mobile clients.

14. A system as defined in Claim 1, further comprising at least one second authenticated acquisition subsystem in wireless signal communication

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with the first authenticated acquisition subsystem to form a peer-to-peer mobile broadband wireless network facilitating video data transfer among mobile clients.

5           15.    A method of automated secure digital mobile video monitoring and recording, the method comprising:  
              digitally watermarking video data;  
              verifying the digitally watermarked video data; and  
              coordinating communications of video data.

10           16.    A method as defined in Claim 15, further comprising intermittently transmitting the digitally watermarked video data prior to verification.

              17.    A method as defined in Claim 16, further comprising storing the digitally watermarked video data at a fixed location.

15           18.    A method as defined in Claim 17, further comprising:  
              wirelessly transmitting the stored video data from the fixed location to at least one mobile system; and  
              displaying the transmitted video data.

20           19.    A method as defined in Claim 15, further comprising compressing the digitally watermarked video data prior to verification.

              20.    A method as defined in Claim 15, further comprising acquiring  
25           original video data.

              21.    A method as defined in Claim 15, further comprising:  
              acquiring original video data at a fixed location;  
              wirelessly transmitting the acquired video data from the fixed location to at  
30           least one mobile system; and  
              displaying the transmitted video data.

22. A method as defined in Claim 15, further comprising applying at least one signature to the video data.

5           23. A method as defined in Claim 15, further comprising verifying at least one signature in the video data.

24. A method as defined in Claim 23, further comprising displaying verified video data.

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25. A method as defined in Claim 23, further comprising wirelessly transmitting the verified video data from a fixed location to at least one mobile system.

15           26. A method as defined in Claim 15, further comprising:  
capturing video data at a fixed location; and  
transmitting the captured video data from the fixed location to a mobile client.

20           27. A method as defined in Claim 15, further comprising wirelessly transmitting video data within a peer-to-peer mobile broadband wireless network to facilitate interoperability among mobile clients.

25           28. A digital video data file encoded with signal data comprising a plurality of block transform coefficients indicative of a secure digital mobile video recording, the coefficients collectively indicative of an original video data sequence with a secure watermark, the secure watermark comprising a plurality of signatures.

30           29. A digital video data file as defined in Claim 28, the data file achieving progressively varying robustness in a single watermark by means of at

least one of error-correcting signature coding and rate-distortion guided bit embedding.